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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/211,469	12/14/1998	OLEG DRAPKIN	0100.990020	9874

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EXAMINER

LUU, AN T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 12/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/211,469

Applicant(s)

DRAPKIN ET AL.

Examiner

An T. Luu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-10,12-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-10,12-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 2, 4, 6-10, 12-16 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 appears to be either misdecdriptive or incomplete because there is no clear distinction between “at least one of the selected supply voltages” and “an input/output pad supply voltage”. As recited in claim, limitations “at least one of the selected supply voltages” and “an input/output pad supply voltage” are the same, then limitation “at least one of the selected supply voltages is different from an input/output pad supply voltage” is not understood. Therefore, the recitation of claim is either misdescriptive or certain limitation is missing.

As to claim 2, limitation “higher” appears to be misdescriptive for the same reason set forth above.

As to claim 7, limitation “the first reference voltage”, line 3, lacks antecedent basis. Claim 13 has similar problem.

As to as to claim 19, it is unclear if limitation “an I/O pad supply voltage”, line 2, is the same as that of claim 1. consequently, limitation “the I/O pad supply voltage”, line 6 does not have a clear antecedent basis. Further, it is unclear if limitation “a maximum input signal voltage”, line7, is the same as that of line 4.

Claim 10 appears to be misdescriptive because “isolation output buffer” and “a core logic” have nothing to do, operationally and configuratively, to the rest of the circuit.

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As to claim 14, limitation “the second reference voltage”, lines 6-7, lacks antecedent basis. Further, it is unclear if limitation “a maximum input signal voltage”, line 9, is the same as that of line 6. Claim 14 also appears to be incomplete because a certain step or element is required such that function of “indicating”, lines 6 and 9, can be carried out. “The control signal” by itself cannot distinguish voltage levels of reference and input signals as required by claim.

As to claims 20 and 21, each of them has similar problems as noted in claim 19.

Claims 2, 4, 6, 8-9, 12, 15-16 and 18 are rejected for being dependent on the rejected claims. In addition, claims 12 and 13 are treated to be dependent on claim 10 since claim 11 was canceled.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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4. Claim 1, to the extent to be understood, is rejected under 35 U.S.C. 102(e) as being anticipated by the Setty et al. reference (U.S. Patent 6,091,300).

Setty discloses in figures 3 and 4 an apparatus comprising a single gate differential receiver (M1, M2); and a switchable voltage supply circuit (Sa, Vdd EXTERNAL and Vdd INTERNAL), operatively coupled to the single gate differential receiver, switchable through at least one control signal (inherency by virtue of a switch) to select a differential receiver supply voltage (Vdd INTERNAL) for the single gate oxide differential receiver as required by claim 1. It is noted that Vdd INTERNAL is different from an input/output pad supply voltage (Vdd EXTERNAL terminal).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 8, 10 and 18, to the extent to be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over the Setty et al reference (U.S. Patent 6,091,300).

In claim 4, Setty discloses all the claimed inventions including teaching of supply voltage to be a voltage level higher than a maximum voltage level of the input voltage (col. 1, lines 28-31 and 43-44). Setty does not disclose a reference voltage applying to a first differential input as required by claim. However, it is known in the art that differential receiving circuit is for comparing two different input signals. It can be specifically either labeled as a comparator if one

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of input is kept at known (reference) level so that the other input can be determined if it is higher or lower than a known level, or labeled as an amplifier if difference between two inputs is amplified for further processing. An Official Notice is taken for the above fact (see enclosed cited prior arts, PTO-948).

Claims 8 and 18 claim an application wherein the invention could be utilized. It would have been obvious for one skilled in the art to employ the invention in any environment which has practical purpose(s) since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). It is noted that an isolation output buffer takes place of a video graphics processor as required by claim 18. In fact, any signal related device can be coupled to the output of the differential receiver described above since the differential receiver is for providing a suitable signal for further processing as needed by application.

As to claim 10, it is a combination of claims 1, 4 and 18. therefore, it is rejected for the same reasons set forth above.

As to claims 14-16, they are rejected for reciting step/method derived from a claimed apparatus of claims 1, 4 10 and 18 noted above.

Response to Arguments

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

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Allowable Subject Matter

8. Claims 6-7, 9, 19, 12, 13, 20, 15, 16 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an apparatus and method thereof comprising elements being configured as recited in claims. Specifically, none of the prior art teaches a second control signal as required in claims 6 and 12; an input transistor as required by claims 7 and 13; a common current source as required by claim 9; and selection of either I/O pad supply or reference with respect to a maximum input signal voltage as required by claims 19-21.

Conclusion

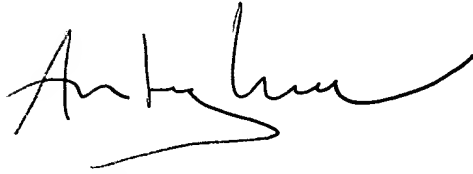
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 703-308-4922. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read 'An T. Luu', with a stylized, sweeping flourish at the end.

An T. Luu
December 9, 2002